Environmental Assessment
Olinghouse Allotment – Term Grazing Permit
EA-NV-030-08-017
May 2008

U.S. Department of the Interior
Bureau of Land Management
Carson City Field Office
5665 Morgan Mill Road
Carson City, NV 89701

I. INTRODUCTION/PURPOSE AND NEED

Introduction

The Olinghouse Allotment is located in Washoe County, Nevada, and is approximately 15 miles northeast of Sparks, Nevada, and 4 miles west of Fernley, Nevada. Administered by the Carson City Field Office (CCFO), Nevada, the allotment consists of 23,162 acres of land administered by the Bureau of Land Management (BLM) and 12,433 acres of private lands. The Olinghouse Allotment is part of the Pah Rah Range, with elevations ranging from slightly under 4,265 feet to almost 7,874 feet. The south boundary fenceline is located just north of Interstate 80; the Spanish Springs/Mustang Allotment borders the western side; the Pyramid Lake Indian Reservation makes up the eastern boundary; and the White Hills Allotment forms the northern boundary. The allotment boundary is fenced except for a small portion of the northwestern boundary. This allotment has historically been authorized for cattle and horses, mainly during the winter and spring months. A map of the Olinghouse Allotment is shown on the following page.

This environmental assessment (EA) analyzes the environmental impacts associated with each of the livestock management alternatives currently being considered for the Olinghouse Allotment. Management options presently under consideration include: 1) authorizing cattle grazing and modifying management; 2) authorizing cattle grazing and continuing with current management; and 3) not authorizing livestock grazing within the allotment at this time.

Purpose and Need

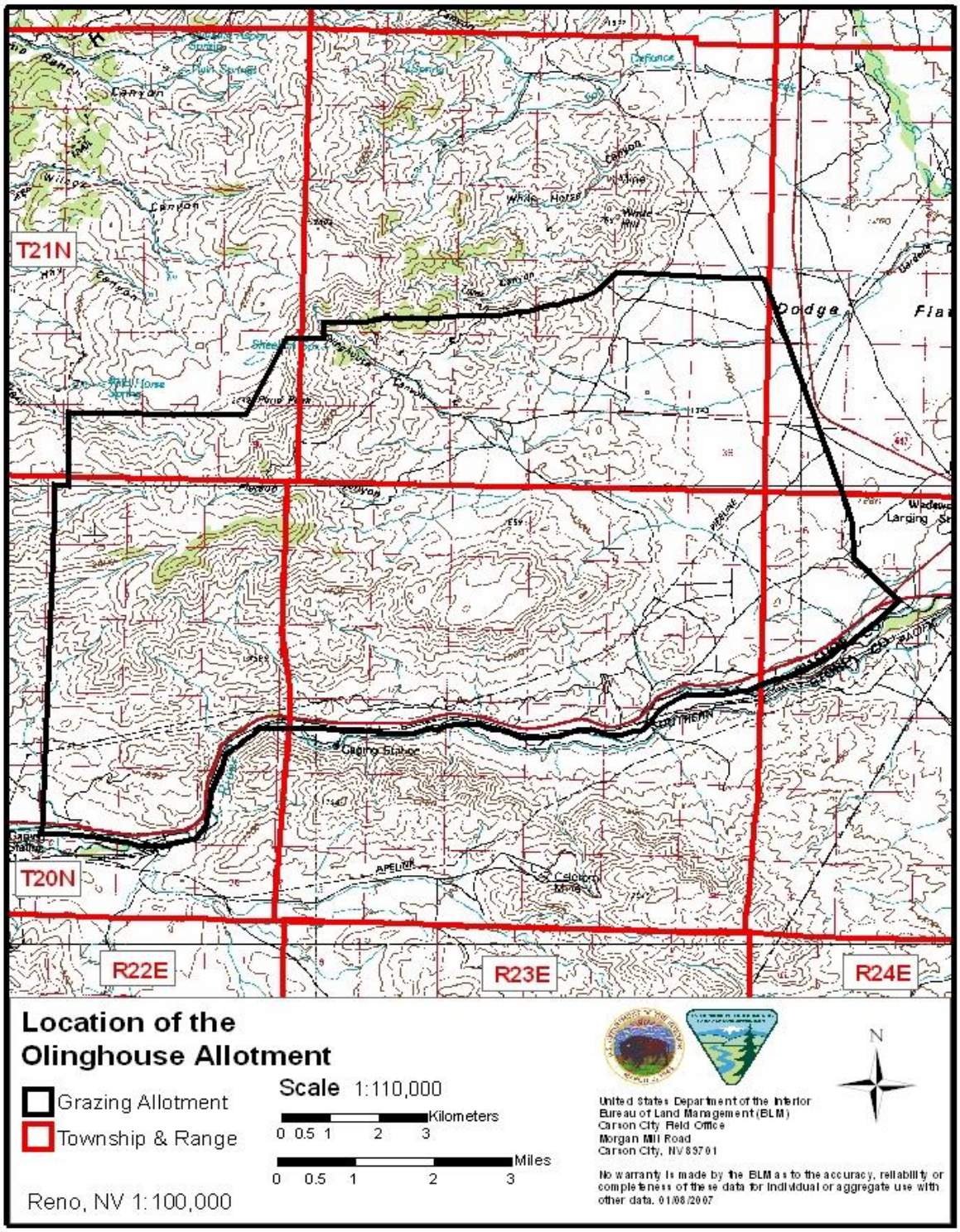
The purpose of this Proposed Action is to authorize the issuance of two Term Grazing Permits for the Olinghouse Allotment consistent with site specific objectives found in the CCFO Consolidated Resource Management Plan (CRMP) and implement livestock grazing practices that will ensure compliance with the approved Standards for Rangeland Health & Guidelines for Grazing Management (S&G's), Sierra Front Northwestern Great Basin Area. Management of grazing will come through the issuance of two grazing permits, which will provide the parameters and guidelines for management of the range resources on the allotment. Proper management will result in improved range condition throughout the area.

These actions are needed at this time because:

- The condition of natural resources on the Olinghouse Allotment was evaluated in September 2007, and the determination was made that the Standards and Guidelines are being met under current grazing practices; however, plant and animal habitat, as well as special species habitat Standards are being met at a very low level. Therefore, livestock grazing practices will need to be adjusted and the changes specified in the two new Term Grazing Permits.

- The lands managed by BLM within this allotment were identified as available for livestock grazing in the CCFO CRMP, and continued livestock grazing is consistent with the goals, objectives, standards and guidelines identified in the CRMP.

- Where consistent with other multiple use goals and objectives, there is a congressional intent to allow grazing on BLM-managed lands. This is evidenced by the Taylor Grazing Act of 1934 (as


T21N
T20N
R22E
R23E
R24E
Dodge
White Horse
Location of the
Olinghouse Allotment
Grazing Allotment
Township & Range
Reno, NV 1:100,000
Scale 1:110,000
Kilometers
0 0.5 1 2 3
Miles
0 0.5 1 2 3
N
United States Department of the Interior
Bureau of Land Management (BLM)
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Carson City, NV 89701
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amended), the Federal Land Policy and Management Act of 1975, the Public Rangelands Improvement Act of 1978, and the approved Standards and Guidelines of 2003, as well as various other federal laws and regulations.

Land Use Plan Conformance Statement

The proposed action and alternatives described in this document are in conformance with the CCFO CRMP desired outcomes. For livestock grazing, these are found on page LSG-1 and are as follows:

1. Maintain or improve the condition of the public rangelands to enhance productivity for all rangeland and watershed values.
2. Initially, manage livestock use at existing levels.
3. Provide adequate, high quality forage for livestock by improving rangeland condition.
4. Improve overall range administration.

Additional Guidance: Standards and Guidelines (S&G's) for Nevada's Sierra Front-Northwestern Great Basin Area (2003).

II. PROPOSED ACTION AND ALTERNATIVES

Proposed Action

- Issue a term grazing permit to permittee #1 (Edwin L. Depaoli), which would authorize 15 cattle to graze on the Olinghouse Allotment from November 1st through May 15th for a total of 100 Animal Unit Months (AUM's). (Note: The calculation for the number of days, the percentage of federal land, and the 15 head of cattle is actually 97 AUM's.)

- Issue a term grazing permit to permittee #2 (Jack Bassett), which would authorize 112 cattle to graze on the Olinghouse Allotment from October 1st through March 30th for a total of 596 AUM's. (Note: The calculation for the number of days, the percentage of federal land, and the 112 head of cattle is actually 593 AUM's.)

No Action Alternative

- Under this alternative, current management would be maintained:

    - Continue to authorize 15 cattle from November 1st through May 15th for a total of 100 AUM's for permittee #1's grazing permit.

    - Continue to authorize 116 cattle from November 1st through April 30th for a total of 596 AUM's for permittee #2's grazing permit.

No Grazing Alternative

- The current term grazing permit for permittee #1, which expires in 2017, would be canceled.

- The current term grazing permit for permittee #2, which expires in 2009, would be canceled.

- With the above cancellations, no livestock would be authorized on BLM-managed lands within the allotment.

Table 1 – Comparisons of the Different Alternatives

	Proposed Action	No Action	No Grazing
Number of Livestock*	127	131	0
AUM's*	696	696	0
Period of Grazing (Permit #1)	11/1-5/15	11/01-05/15	No Grazing
Period of Grazing (Permit #2)	10/01-03/30	11/01-04/30	No Grazing

*****Includes both grazing permits

III. AFFECTED ENVIRONMENT

Scoping and Issue Identification

On November 6, 2007 a letter was sent to possible interested publics to identify those individuals and organizations interested in specific actions on specific allotments under the jurisdiction of the CCFO. The purpose of the scoping letter was to gather information and determine who would be further interested in participating in the evaluation process on the CCFO grazing allotments.

Standard operating procedures direct the BLM to supply the State Clearinghouse with an electronic copy of this document for distribution amongst State agencies. In addition, copies will be sent to the following entities:

Permittee of Record, Edwin L. Depaoli
Permittee of Record, Jack Bassett
Western Watersheds Project
Resource Concepts, Inc
Pyramid Lake Paiute Tribe
Washoe Tribe of Nevada and California
Reno-Sparks Indian Colony

The internal scoping with the BLM staff began in May 2007 and has been ongoing.

Proposed Action

General Setting

The Olinghouse Allotment is located in Washoe County, Nevada, and is approximately 15 miles northeast of Sparks, Nevada, and 4 miles west of Fernley, Nevada. Administered by the CCFO, the allotment consists of 23,162 acres of land administered by the BLM and 12,433 acres of private lands. The Olinghouse Allotment is part of the Pah Rah Range, with elevations ranging from slightly under 4,265 feet to almost 7,874 feet. The south boundary fenceline is located just north of Interstate 80; the Spanish Springs/Mustang Allotment borders the western side; the Pyramid Lake Indian Reservation makes up the eastern boundary; and the White Hills Allotment forms the northern boundary.

In August 1999, the Wilcox fire burned approximately 12,458 acres, or 35%, of the Olinghouse Allotment, largely on the west side. Although some sagebrush (*Artemisia* sp.) plants were killed, many of the perennial plants appeared to be healthy enough to survive; therefore, only 640 acres were aerially seeded. Included in the seed mix were Hycrest crested wheatgrass (*Agropyron cristatum* var. *desertorum*), Manchar smooth brome (*Bromus inermus*), and Arriba western wheatgrass (*Pascopyrum smithii*). The burned area was closed to livestock grazing until the fall 2004 to allow the surviving vegetation time to regrow and seedlings time to establish.

Parts of the Pah Rah Herd Area fall within this grazing allotment. Due to a checkerboard land pattern and requests from private landowners, all wild horses were removed from the Pah Rah Herd Area and surrounding area in 1985. This Herd Area was not designated as a Herd Management Area during the land use planning process (Reno MFP).

Since the wild horses have been removed, some other horses have established themselves in and around the Pah Rah's. These horses originated from the Pyramid Lake Indian Reservation, and some tribal members have claimed and captured some of them. These horses are considered either private horses belonging to the Pyramid Lake Tribe or estray horses under the State of Nevada's Brand Department. There are no wild horses in the Pah Rah's as defined by the Wild Horse and Burro Act, and no forage is allocated for horse use in the Pah Rah's.

The Olinghouse Gold Mine, in operation from 1998 to 1999, lies in the northwestern portion of the allotment. The whole project affected around 438 acres. A heap leach pad was constructed and used to process gold from low grade ores. After the operation became inactive, this fenced area, which is approximately 300 acres, was seeded with native shrub, forb, and grass species. Although the fourwing saltbush that was planted looks healthy and vigorous, reclamation of the site has not reached the desired productivity level in a variety of plant species. The area is to remain closed to grazing until it is determined that a broader mix of the other plant species seeded have become established on the site. These include Mormon tea (*Ephedra viridis*), spiny hopsage, (*Grayia spinosa*) low sagebrush (*Artemisia arbuscula*) and/or big sagebrush (*Artemisia tridentata*), Indian ricegrass (*Achnatherum hymenoides*), bottlebrush squirreltail (*Elymus elymoides*), Sandberg bluegrass (*Poa secunda*), scarlet globemallow (*Sphaeralcea coccinea*), Palmer penstemon (*Penstemon palmeri*), and Lewis flax (*Linum lewisii*).

In the process of reclaming the site, a portion of the adjacent hillside was removed, also removing one of the roads in the allotment that served as the only route to one of the frequency transects. Photos of the area are shown on the next page.

Several wind energy testing projects have been approved, and currently, there is a pending application for a wind turbine project on alternating public/private sections of land along the western portion of the Olinghouse and White Hills Allotments. These projects will include road construction and the installation of turbines, with heights of the turbines ranging from 241 feet for the smaller size and 492 feet for the larger turbines. Permanent maintenance areas will also be constructed. At this date, it is unknown when these projects will begin or end. Also, the number of turbines that will be installed and the rate of installation are still unknowns; therefore, it is difficult to determine the extent that grazing will be affected by these projects.

Fourwing Saltbush Inside Exclosure

Area Cut Off by Reclamation Project

Critical Elements of the Human Environment

Critical Element	Not Present*	Present/Not Affected*	Present/May Be Affected**	The following rationale was used to determine that Critical Elements present in the area would not be affected as a result of implementation of the Proposed Action.
Air Quality	X			
Areas of Critical Environmental Concern	X			
Cultural Resources		X		See comments directly below table.
Environmental Justice	X			
Farm Lands (prime or unique)	X			
Floodplains	X			
Invasive, Nonnative Species			X	The implementation of the Proposed Action would have very little effect on the two small noxious weed populations. These noxious weed infestations would be sprayed with the appropriate herbicides and monitored as part of the CCFO's annual treatment plan.
Migratory Birds			X	Under the Proposed Action Alternative, native vegetation areas in lower elevations would see somewhat less livestock use in the spring; however, some livestock grazing would last the entire spring season leaving little for wildlife before the annual forage cured for the year. Habitat conditions would remain below the level that would support the greatest numbers and diversity of migratory birds. Some habitat conditions could continue to deteriorate.
Native American Religious Concerns		X		See comments directly below Cultural Resources section.
Threatened or Endangered Species	X			
Wastes, Hazardous or Solid	X			
Water Quality (Surface/Ground)			X	Implementing the Proposed Action would maintain or slightly improve water quality at Wild Rose and Sheehan Springs. The proposed change in season of use would afford some additional rest during the early part of the growing season, possibly enhancing ground cover and reducing sedimentation of the water. Current grazing practices, however, do not appear to be significantly affecting water quality.
Wetlands/Riparian Zones			X	Implementing the Proposed Action would maintain or slightly improve riparian conditions on the allotment. The proposed change in season of use would afford some additional rest during the early part of the growing season, but current grazing practices do not appear to be significantly affecting riparian conditions.
Wild and Scenic Rivers	X			
Wilderness	X			

*Critical Elements determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.

**Critical elements determined to be Present/May Be Affected must be carried forward in the document.

Cultural Resources:
Following BLM regulations (43 CFR Part 8100) and other federal laws including the National Historic Preservation Act (16 USC § 470f) and its implementing regulations (36 CFR Part 800), as amended, BLM reviewed the immediate region for historic properties prior to a federal undertaking (issuance of a federal permit). The potential exists for adverse impacts to cultural resources and/or historic properties due to a continuation of livestock grazing with or without modifications to the grazing permit. By definition, an historic property is a "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" and includes "artifacts, records, and remains that are related to and located within such properties" (36 CFR 800.16(l)(1)).

Based on research of files at the CCFO and the Nevada State Museum, the allotment contains several locations of known cultural resources. To date, in and immediately adjacent to the BLM-managed lands of the Olinghouse Allotment, known cultural resources represent significant past human use of the landscape. Previous cultural resources investigations within the allotment have resulted in a relatively large amount of inventory. Previous inventory within the allotment comprises 5,456 acres (about 15.3% of the allotment) and has identified 143 sites, including numerous historic properties. Inventories within and within a mile of the allotment comprise 8,646 acres and have identified 219 sites. Cultural resources within the allotment include prehistoric-period lithic scatters, rock shelters, stone alignments, task sites, and camp sites ranging from the Middle Archaic through the nineteenth-century/protohistoric era. Also present are historic-period debris scatters, a ranch complex, woodcutters' camps and wagon roads, hunting blinds, stone structures and buildings, roads, limited settlement, transportation (including segments of the Nevada Railroad grade), mining complexes, and prospects. Further details on local site types and the potential for effect to historic properties from livestock activities associated with the issuance of a grazing permit are available in a technical report prepared for this permit renewal (CRR 3-2419, Lane 2008) and the published Carson City District Cultural Resources overview report (Pendleton et al. 1982). Based on review of range use data and reports on areas previously inventoried in or near the allotment, livestock grazing is not a significant impact to known historic properties (Lane 2008). Therefore, relative to cultural resources, there exists no need to alter the Proposed Action for the Olinghouse Allotment in order to prevent unnecessary or undue degradation.

BLM analyses included the potential impacts of implementing allotment improvements provided above, under the Proposed Actions and Alternatives. However, for each of the Proposed Actions and Alternatives, no specific improvements are proposed.

Additional allotment improvements may be part of the issuance of this grazing permit, but all proposed project improvements have the potential to adversely affect cultural resources. Per 36 CFR Part 800 and 43 CFR Part 8100 (BLM), as amended, BLM is required to identify and evaluate cultural resources within the area of potential effect from an undertaking such as a waterline, fence, creation of new water haul locations, or other area that involves ground disturbance or that concentrates livestock. Any historic properties identified, documented, and evaluated as eligible for inclusion in the National Register of Historic Places within a proposed improvement area of potential effect will be avoided by proposed improvements. If these cannot be accomplished, specific project undertakings will be cancelled, or the allotment use will be modified to result in no adverse effect to the historic property(ies) pursuant to 36 CFR Part 800, and in consultation with the local tribal entity and the Nevada State Historic Preservation Office.

Native American Religious Concerns:

A consultation letter was sent to the Pyramid Lake Paiute Tribe (PLPT), Reno-Sparks Indian Colony (RSIC), and the Washoe Tribe of Nevada and California on November 29, 2007, concerning the permit renewal for the Olinghouse Allotment.

During a face to face meeting with the Native American Graves Protection and Repatriation Act (NAGPRA) committee members for the PLPT on February 7, 2008, they provided the following concerns: impacts to cultural resources by overgrazing, to include impacts to water sources and native plants, all of which are considered cultural resources to the Tribe.

A face to face meeting was conducted with the Washoe Tribal Historic Preservation Office (THPO) on January 10, 2008, followed by a telephone conversation on February 21, 2008, concerning this grazing permit renewal. After a discussion between the THPO and the Environmental Director the following concerns were provided:

- type of fencing that would be utilized for exclosure projects;
- information for each type of fencing will need to be provided (wildlife specific) for all fencing project proposals;
- measures taken to provide adequate protection of antelope kidding locations; and
- impacts to cultural resources, native plants and water sources.

The wildlife biologist stated that although the cattle do graze when antelope are kidding, the permittees are required to remove the cattle from kidding locations during that time period. The Tribe favors the native flora and fauna over the grazing of domesticated animals especially in light of impacts to cultural resources which include native plants, water and wildlife.

A face to face meeting was conducted with the RSIC cultural resource manager on February 12, 2008, and the topic of the permit renewals was discussed. A request was made for the DRAFT EA for review. Concerns were consistent with the other two Tribes regarding impacts to cultural resources, to include water, native plants and wildlife.

Information was provided concerning the analysis associated with the Standards and Guidelines for grazing permit renewals. Field trips are conducted by the interdisciplinary team to examine the grazing allotment location for all resources in an effort to maintain and manage for healthy lands. Additionally, the cultural resource program conducts a review of previously conducted surveys, cultural resources recorded, and potential for effects to known historic properties. Reconnaissance is conducted in locations of severe impacts from grazing as identified, as well as locations with potential for cultural resources, specifically in and around water sources.

Any proposed improvements may potentially have an effect on tribal concerns. Per 36 CFR Part 800 and 43 CFR Part 8100 (BLM), as amended, BLM would conduct Native American coordination and consultation, as necessary.

Resources Present but not Affected (other than critical elements)

Bureau specialists have further determined that the following resources, although present in the project area, are not affected by the Proposed Action: Lands, Recreation,Visual Resources.

Resources Present and Brought Forward for Analysis

Range:
There are two permittees on the Olinghouse Allotment, with both authorized as cow/calf operations.

Grazing permit #1 authorizes 15 cattle from November 1st until May 15th for a total of 100 AUM's. This permittee, who owns a section of land that lies between the Olinghouse and White Hills Allotments, mainly uses the far northwest portion of the allotment in the spring. This area is nearly 8,000 feet in elevation so access can be limited by snow in some years.

Grazing permit #2 authorizes 116 cattle from November 1st through April 30th for a total of 596 AUM's. This permittee runs his cows on the lower elevations, largely on the southeast portion of the allotment. Currently, this permittee has a lease agreement with the Nevada Land & Resource Company, Inc., which owns private land within the Olinghouse Allotment. The current permit shows that the allotment is 86% public land. In August 2007, CCFO received notification from the land company that some of the private land was removed from permittee #2's lease agreement; therefore, the public land should be adjusted to 89%. See Appendix A for the % public land calculations.

The Olinghouse Allotment is classified as a category "C" (custodial) based on a large amount of the allotment being without significant resource issues.

Vegetation:
The major grass species found on the Olinghouse Allotment are Indian ricegrass (*Achnatherum hymenoides*), Thurber's needlegrass (*Achnatherum thurberianum*), desert needlegrass (*Achnatherum speciosum*), bottlebrush squirreltail (*Elymus elymoides*), Basin wildrye (*Leymus cinereus*), and Sandberg bluegrass (*Poa secunda*).

The major shrub species found on the Olinghouse Allotment are big sagebrush (*Artemisia tridentata*), low sagebrush (*Artemisia arbuscula*), Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis*), Bailey greasewood (*Sarcobatus vermiculatus* var. *baileyi*), shadscale saltbush (*Atriplex confertifolia*), bud sagebrush (*Artemisia spinescens*), green rabbitbrush (*Chrysothamnus viscidiflorus*), antelope bitterbrush (*Purshia tridentata*), littleleaf horsebrush (*Tetradymia glabrata*), and green ephreda (*Ephedra viridis*) .

The major tree species found on the allotment are Utah juniper (*Juniperus osteosperma*) and singleleaf pinyon pine (*Pinus monophylla*).

Invasive plants common on the allotment are Russian thistle (*Salsola kali*) and cheatgrass (*Bromus tectorum*).

Salt Desert Shrub Site/Cheatgrass Understory

Soils:

The soils within the Olinghouse Allotment vary considerably in physical, chemical, and biological characteristics. Parent material, surface and subsurface textures and rock fragments, elevation, aspect, and slope determine the inherent productivity. Erosion and runoff potential, while affected greatly by these factors, are also dependant upon the basal and canopy cover of vegetation on site. Roads, livestock and horse use, mining and other overland activities, and general motorized vehicle use have impacted soils in certain areas. Generally the soils in this allotment are classified as either Aridisols or Mollisols, with much of the area in the seven to ten inch precipitation zone. Soil reactions range from near neutral to moderately alkaline. Detailed descriptions of the soils within the allotment can be found within the Washoe County Soil Survey-South Part, issued in 1983 by the U.S. Dept. of Agriculture-Soil Conservation Service.

Invasive/Nonnative Species:

Two noxious weed infestations have been located within the allotment. Both infestations, one of salt cedar (*Tamarix* species) and one of tall whitetop (*Lepidium latifolium*), are found along Olinghouse Canyon. They are relatively small and should be easily treatable with herbicides.

Wetlands/Riparian Zones:

In 2001 and 2007, riparian assessments were performed at two springs on the Olinghouse Allotment. No other riparian areas exist on the allotment. The following table shows the locations, areas, and condition ratings for the sites. Both springs were in proper functioning condition (PFC) during both assessments.

2001 and 2007 Riparian Assessment Data for the Olinghouse Allotment

Site Name	Dates Assessed	UTM Northing	UTM Easting	Rating	Acres	Miles
Sheehan Spring	8/20/01 & 7/10/07	4393180 m	290082 m	PFC	0.2	0.2
Wild Rose Spring	8/20/01 & 7/10/07	4393041 m	290307 m	PFC	< 0.1	--

A sharp transition exists between the narrow riparian area and upland vegetation. It appears that encroachment by sagebrush could dry the springs over time, but the water flow is generally steady, especially from Sheehan Spring. The assessments and anecdotal information from a local miner suggest that the sources flow even in the driest years. Some use by cattle and estray horses was noted, such as trailing above the riparian area, but impacts were not severe.

The sources had pipelines that appeared to be from past mining use. The pipeline from Sheehan Spring still conveys water, but it had a break that drains back to the riparian area and had even watered a small area above the drainage bottom that has now developed a riparian plant community.

Water Quality (Ground & Surface):

No class waters or beneficial uses are designated within the Olinghouse Allotment. Therefore, only the descriptive water quality standards pertaining to all surface waters in Nevada (NAC 445A.121) apply to Sheehan and Wild Rose Springs. During rangeland health evaluations and riparian assessments conducted on July 10, 2007, no significant impacts to water quality due to current land uses including livestock grazing were observed. There were no visual signs, odors, or other indications that water quality was being impaired under the current grazing system.

The south boundary of the allotment roughly coincides with the Truckee River from the 102 Ranch to the Pyramid Lake Indian Reservation. The State of Nevada has designated beneficial uses and established water quality standards for the Truckee River, so potential impacts from livestock grazing were considered. No impacts are likely, however, because livestock do not have access to the river, and livestock use of the southern half of the allotment has been rated as slight over the years.

General Wildlife:

Several terrestrial wildlife habitats occur within the allotment area (Nevada Wildlife Action Plan 2006). Extended drought over the past few years has affected the vegetation in this allotment, particularly on the lower alluvial fans. It is very likely that shrubs in lower elevations are experiencing winterkill as a result of dry winters and frost heaving. General wildlife populations should be fairly diverse at upper non-riparian elevations. Elsewhere, general wildlife diversity and numbers are probably reduced due to less than ideal habitat conditions. General wildlife habitats in the allotment are as follows:

Intermountain Cold Desert Scrub – Historically, this habitat would have been dominated by Indian ricegrass (Nevada Wildlife Action Plan 2006). Budsage and *Ephedra* sp., some globemallow and bottlebrush squirreltail occur at the lower elevations of this allotment. Cheatgrass dominates the understory and considerable aftermath of this species exists. A few dessicated samples of the free-living lichen *Xanthoparmelia* were found. Wildlife species associated with this habitat type include pale kangaroo mouse, Great Basin collared lizard and Black-throated Sparrow (Nevada Wildlife Action Plan 2006).

Cheatgrass short-circuits ecosystems because it out competes native species when these are trying to establish (FEIS 2008). Although cheatgrass is acceptable livestock forage for a few weeks each year during green-up, it is not good cured forage. When it is not available, the remaining native shrubs and grasses are grazed by livestock, and in drought years, are further weakened in the system. This

weakening sets native vegetation stands up for further expansion of cheatgrass. Cheatgrass increases fragmentation and degradation of wildlife habitats (Nevada Wildlife Action Plan 2006).

Sagebrush – At the upper elevations, mountain big sagebrush and low sagebrush occur (Nevada Wildlife Action Plan 2006). Mountain big sagebrush is key mule deer forage. Some grasses and forbs can be found, but diversity is not great, and there is considerable bare ground. Phlox (*Phlox* sp.) was found, but this year, flowers dried before seeds were produced. Bitterbrush is present in some areas and appears to be reproducing. It showed signs of drought stress in 2007. Older burns at mid-elevation are not recovering quickly, having only a little rabbitbrush and cheatgrass present. Great Basin pocket mouse, sagebrush lizard and Sage Sparrow are species associated with this habitat type (Nevada Wildlife Action Plan 2006).

Lower Montane Woodlands - Singleleaf pinyon and Utah juniper are the dominant vegetation types in this habitat (Nevada Wildlife Action Plan 2006). Some mountain mahogany (*Cercocarpus* sp.) may be present at the extreme upper elevations of this allotment. The pinyon-juniper woodland does not appear to be encroaching at upper elevations; however, the mid-elevation drainages have some pinyon-juniper encroachment. Forbs and grasses are sparse, especially as the canopy closure increases as is the case in the drainages of this allotment. Bitterbrush is present in some areas and appears to be reproducing. It showed signs of drought stress in 2007. Cliffrose (*Purshia stansburiana*) and bitterbrush are key mule deer forage species in this habitat type. Wildlife species such as short-horned lizards, gray fox and Gray Vireo can be found in this habitat type (Nevada Wildlife Action Plan 2006).

Springs and Springbrooks (Nevada Wildlife Action Plan 2006) - There are only springbrook outflows associated with springs in this allotment. Spring sources, dominated by *Rosa* that are in good condition, appear to be encroached by sagebrush, which will eventually dry these through evapotranspiration. There are scattered clumps of Basin wildrye in some of the drainages. There are quite a few seep-looking areas, but all were dry in 2007 due to the extended drought. There are a few clumps of elderberry (*Sambucus* sp.) along the main drainage. Although these appeared to be in acceptable condition, they will probably go out of the system eventually as it dries due to sagebrush encroachment. There are cottonwood trees near the Olinghouse townsite. Wildlife species associated with this habitat type include wandering garter snake and shrew species (Nevada Wildlife Action Plan 2006).

Talus and Volcanic Rock (Nevada Wildlife Action Plan 2006) - There is a considerable amount of talus and volcanic rock outcroppings in the mid and upper elevations of the allotment. These sites could support raptor reproduction and may support several bat species, particularly spotted bats. This habitat would be considered a special feature with the dominant sagebrush and woodland habitats (Nevada Wildlife Action Plan 2006).

Historically, most deer came into the Olinghouse Allotment from the Lassen Tahoe and Doyle herds west of the Pah Rah Range (BLM 1988). A 1973 wildlife report indicated that deer summer ranges were generally lacking and limited year round numbers (Berg 1973). The western half of the allotment has been and is currently considered yearlong mule deer habitat (BLM 1982; Nevada Dept of Wildlife 2006). There are a few resident mule deer that use the allotment. The migratory deer are now nearly cut off from the Pah Rah's by subdivision construction and other human uses. Additionally, western mule deer numbers have had a decades-long decline where high deer numbers were not as high, and lows were lower than previous lows. Although declining habitat condition has been identified as a universal cause, some of the cause is still unknown (deVos ND). A few resident deer use the allotment and reproduce; however, the majority of the resident deer currently use areas farther north, which could be related to better forage conditions. Additionally, the human pressure from Reno decreases farther north. The

principal winter deer forage in the allotment is mountain big sagebrush and bitterbrush. There is abundant mountain big sagebrush at mid-elevation, and it is in fair shape considering the drought. However, understory consisting mainly of cheatgrass is lacking diversity. 2007 was a drought year, but there should be some evidence of desiccated perennial grasses and forbs if these existed. Bitterbrush is present and appears to have some age class structure, which is good. It has not been utilized too heavily but shows signs of drought stress as of 2007. At lower elevations, cheatgrass dominates the vegetation systems. Livestock graze the cheatgrass green-up that deer would use. Livestock also graze every shrub and other plants such as bitterbrush on the bench areas while waiting for the green-up of cheatgrass.

Every spring source in this allotment is a key fawning area. A one-mile radius around springs within mule deer range is considered key fawning habitat in spring/summer (Wickersham 1990). Spring sources appear to be in functional condition but are encroached by sagebrush, which will eventually dry these through evapotranspiration. Riparian areas are dominated by *Rosa* species, and riparian diversity is poor. Much of this problem stems from historic rather than current livestock grazing. Due to a lack of understory vegetation diversity that allows yearlong use, the allotment is only poor to fair deer range.

Historically, antelope were present in all valleys of Nevada (BLM 1988). In 1982, no pronghorn range was identified in this allotment (BLM 1982); however, pronghorn now occupy this allotment. Currently, the west half of the allotment is considered yearlong pronghorn habitat. The east half of the allotment at lower elevation is considered crucial winter habitat (NDOW 2006). Important areas for fawns include the top of Pond Peak and Wilcox Canyon. Wilcox Canyon is outside of the allotment but is nearby (Axtell 2008). There is probably movement from the Olinghouse Allotment into the Spanish Springs/Mustang Allotment. During the hot summer, pronghorn use mid and higher elevations and tree cover to escape the heat. Pronghorn do well in low seral, disturbed areas (Yoakum 1983). The fact that the allotment currently has two types of designated pronghorn range, including a crucial winter range, when these animals were only incidental visitors in 1982, is possible testimony to the allotment's declining vegetation trend from more stable to disturbed.

On the lower elevation alluvial fans, particularly in the southern part of the allotment, budsage, or bud sagebrush, coupled with globemallow and *Xanthoparmelia* occur in very limited amounts. These are key pronghorn species (Yoakum et al 1983). For pronghorn areas in good condition, the key species are at least moderately abundant. On crucial pronghorn winter range in 2007, plants such as budsage did not break dormancy and exhibited extreme drought stress. In 2007, there was little sign of understory plants except cheatgrass; cheatgrass dominates this area's aspect. Livestock confine themselves to the lower bench areas during winter, especially harder winters, and use every native plant that tries to grow while waiting for the cheatgrass to green up. The critical factor opening niches for cheatgrass invasion is a heightened disturbance regime that allows cheatgrass to proliferate in native vegetation areas (FEIS 2008). Pronghorn consume <1% of forage produced on western rangelands (Yoakum et al 1995) so these animals are not contributing to the trend. Livestock use appears to be keeping the crucial pronghorn winter range in poorer, possibly declining trend condition because perennials that try to reproduce are taken in spring or eaten in the winter.

Upper elevation conditions for pronghorn are similar to mule deer.

This allotment is part of the historic bighorn range associated with the Pah Rah Range. It has potential for bighorn sheep but is not currently occupied (NDOW 2006). Land use patterns have not changed since 1982 when it was decided that these did not lend to a re-introduction.

This allotment is considered to be occupied black bear range (Nev. Dept Wildlife 2005).

Mountain lions have been confirmed in the allotment and sign/animals are often seen near the Olinghouse townsite. Lions would occur in the rest of the allotment. Lion numbers cycle slightly behind mule deer numbers.

The Olinghouse Allotment lies within the Pah Rah Sage-Grouse Population Management Unit (PMU). The Greater Sage-Grouse Conservation Plan for Nevada and Eastern California, June 30, 2004, Appendix M – Pah Rah/Virginia PMU Plan covers this population.

Sage-Grouse require sagebrush habitats for all phases of their life cycle. Winter habitat includes sagebrush tall enough to be available when snow is present for food and cover. Pre-nesting habitat includes sagebrush with forbs. Nesting habitat includes areas with sagebrush and residual grass cover tall and thick enough to conceal and mitigate temperature extremes. Brood-rearing habitat includes succulent forbs found within the sagebrush community and often wet meadows (Axtell 2008).

Leks have not been identified within this allotment; however, one lek is known to be approximately 1.5 miles to the north of the allotment and another lek is suspected to be approximately 2 miles north of the allotment (Axtell 2008). Sage-Grouse can nest many miles from leks; therefore, Sage-Grouse would be expected to nest within the allotment in suitable habitat.

Current Sage-Grouse management goals, objectives and measures that apply to this allotment include the following:

- Maintain existing sagebrush communities which meet Western Association of Fish and Wildlife Agencies (WAFWA) guidelines and restoring sagebrush on R1 and R4 areas.

- Goals for nesting habitat are for a sagebrush canopy cover of 15 to 25%, perennial herbaceous cover averaging $\geq$ 18 cm in height, $\geq$15% canopy cover of grasses and $\geq$ 10% cover for forbs.

- Conservation measures: Graze vegetation in a manner sufficient to facilitate perennial plant seedling establishment, enhance vigor, and achieve 18 cm or residual herbaceous cover.

- Modifying the "terms and conditions" of grazing permits to assure 18 cm, or as site and species potential will allow of residual herbaceous cover in nesting habitat (Axtell 2008).

Western Association of Fish and Wildlife Agencies – Greater Sage-Grouse Comprehensive Conservation Strategy

Upland game birds using this allotment would include Mourning Dove, Mountain and California Quail, and the exotic Chukar Partridge. If riparian areas associated with seeps and springs were not sagebrush encroached and contained a variety of riparian plants, populations of these birds would be greater. Much of this problem stems from historic rather than current livestock grazing.

Although general wildlife species use every habitat within the allotment, habitat conditions are below the level that would support the greatest numbers and diversity. Cheatgrass dominated understories and sagebrush encroached riparian areas are the main factors for the poorer habitat conditions. The winter through spring livestock grazing that is currently permitted appears to be holding or driving the area on the east side of the allotment into an extremely low seral condition. The permittees are green cheatgrass proponents, which means that livestock management is done, not to reduce cheatgrass, but to maintain or increase it. Unfortunately, while livestock that currently graze in winter are waiting for the few weeks of

green cheatgrass, they eat everything else. Native plants weaken and become ripe for cheatgrass invasion. When cheatgrass is useable for livestock, it is also needed by many general wildlife species in the area that may not presently be able to use it. The present situation is meeting habitat requirements for general non-game wildlife species at a low level and for game species at a moderate level.

Special Status Species:

Federally Listed Species

There are no federally listed species of animals associated with this allotment.

BLM Sensitive Species

BLM Manual 6840 defines sensitive species as "…those species not already included as BLM Special Status Species under (1) Federal listed, proposed or candidate species; or (2) State of Nevada listed species. Native species may be listed as "sensitive" if (1) it could become endangered or extirpated from a state or significant portion of its range; (2) it is under review by the FWS/NMFS; (3) numbers or habitat capability are declining so rapidly that Federal listing may become necessary; (4) it has typically small and widely dispersed populations; (5) it inhabits ecological refugia, specialized or unique habitats; or (6) it is state-listed, but is better conserved through application of the BLM sensitive species status." It is BLM policy to provide sensitive species with the same level of protection that is given Federal candidate species. The major objective of this protection is to preclude the need for Federal listing (BLM 2003).

The general condition of the highest elevation sensitive species habitat is mixed. Grasslands and shrubs appear to be in relatively good condition. Although extended drought is affecting these areas, more snowfall and rain occurs in these areas. Pinyon-juniper encroachment is confined to drainages, and that has allowed shrubby species to maintain diversity and dominance on hillsides. Cheatgrass dominates the understory, with native grass and forb abundance being reduced. Interspaces between shrubs are noticeably bare in drought years like 2007.

The springs in this allotment are functioning (BLM 2007) but appear to be sagebrush-impacted, which will cause these to dry over time. Riparian vegetation is not abundant or diverse. Some of the sensitive species that should be using these sites would find reduced riparian forage vegetation, reduced insect prey, and reduced small mammal prey species. Time spent on this allotment may be shortened for BLM sensitive species needing riparian areas.

Lower elevation herbaceous and shrubby vegetation is being utilized by livestock in the winter and is being heavily affected by the extended drought. Because cheatgrass is the dominant vegetation type, shrub and herbaceous diversity is low. Sensitive species diversity and use would mirror this condition.

Some of the listed BLM sensitive species use every habitat within the allotment to a greater or lesser extent on a yearlong basis. Livestock grazing is not an issue for Loggerhead Shrike (www.natureserve.com). Granivores like Vesper Sparrow would find little herbaceous seed production on the allotment due to a general lack of perennial forbs and grasses. The occurrence of species like Burrowing Owl and other species sensitive to exotic vegetation such as cheatgrass is inversely proportional to the amount of cheatgrass and commensurate native vegetation loss (Neel 1999). Naturally limited pygmy rabbit habitat occurs on the allotment. This allotment's cliffs with their eastern aspect provide excellent nesting sites for raptors and owls. The eagles, owls, falcon and hawks that use and possibly nest in the allotment would do well on the prey species currently available. The bats that should use the area may not be as abundant because the allotment does not support the forb nectar plants or a strong insect population for some of these mammals.

Although BLM sensitive species use every habitat within the allotment, habitat conditions are below the level that would support the greatest numbers and diversity, especially on the bench area of the allotment. The present situation is meeting habitat requirements for BLM sensitive species at a reduced level. The list of BLM sensitive species that occur or are likely to occur in the allotment area is shown in Appendix B.

Migratory Birds

On January 11, 2001, President Clinton signed Executive Order 13186 (Land Bird Strategic Project) placing emphasis on conservation and management of migratory birds. The species are not protected under the Endangered Species Act, but most are protected under the Migratory Bird Treaty Act of 1918. Management for these species is based on Instruction Memorandum – IM 2008-050 dated December 18, 2007. The Intermountain West is the center of distribution for many western birds. Over half of the biome's Species of Continental Importance have 75% or more of their population here (Beidleman 2000). Nevada provides key stopover and nesting habitat for a disproportionate number of birds listed as species of concern (Floyd 2007; BLM 2007). Species of concern associated with this area are shown in Appendix C (Floyd 2007).

There are no Important Bird Areas (IBA) or wintering areas associated with the general project area (McIvor 2005).

As stated above, long-term drought is affecting the condition of the vegetation in the allotment so that migratory bird use may be more limited in duration than in a normal moisture year. Livestock use of the lower alluvial fan is such that forbs and grasses that should be present in a normal moisture year are lacking due to the dominance of cheatgrass. Food and prey items including small mammals, reptiles, insects and seeds would not be produced at potential. This could be due to the lack of perennial forbs and grasses.

Upper elevation areas that are away from water are not used by livestock for the most part and would support those migratory birds associated with upland shrubs, pinyon and juniper and cliff/talus habitats. However, lack of understory diversity due to cheatgrass dominance is keeping food items from being produced at ideal levels. Short-eared Owl, Burrowing Owl and all of the species of concern associated with shrubs are sensitive to overgrazing by livestock on grasses and forbs when it alters community structure which has happened on this allotment. These species are also sensitive to cheatgrass invasion (Neel 1999; Beidleman 2000; Floyd *et al* 2007).

Riparian areas in this allotment lack abundance and diversity of riparian vegetation. Sagebrush encroachment has already been identified as an issue. Migratory birds that need or would use riparian vegetation would use this allotment only minimally, or not at all.

Although many migratory birds use every habitat within the allotment, habitat conditions are below the level that would support the greatest numbers and diversity. Some of the less tolerant species of migratory birds would not be able to use habitats that should be in place given the soil site due to the altered community structure. The present situation is meeting habitat requirements for migratory birds at a low level.

Alternatives

The description of the affected environment for the No Action and No Grazing Alternatives would be the same as that for the Proposed Action.

IV. ENVIRONMENTAL CONSEQUENCES

Proposed Action – Environmental Impacts

Range:
Permit #1: Under the Proposed Action Alternative, grazing permit #1 (Edwin L. Depaoli) would authorize 15 cattle from November 1st until May 15th for a total of 100 AUM's. This would not be a change from the current permit. This permittee, who owns a section of land that lies between the Olinghouse and White Hills Allotments, mainly uses the far northwest portion of the allotment in the spring. This area is nearly 8,000 feet in elevation so access can be limited by snow in some years.

Permit #2: Under the Proposed Action Alternative, grazing permit #2 (Jack Bassett) would authorize 112 cattle from October 1st until March 30th, for a total of 596 AUM's. The beginning of the grazing season would be a month earlier. The number of cattle would decrease by 4, and the number of AUM's would remain the same. This decrease in cattle numbers is due to the decrease of private land leased by the permittee within the Olinghouse Allotment.

Vegetation:
Permit #1: Under the Proposed Action Alternative, 15 cattle could remove up to 100 AUM's from November 1st until May 15th, mainly in the higher elevations on the northwest portion of the allotment.

Permit #2: Under the Proposed Action Alternative, 112 cattle could remove up to 596 AUM's from October 1st until March 30th. The cattle would be removed from the allotment a month earlier in the spring in order to improve the health and vigor of the plants. The perennial grass species found on the Olinghouse Allotment, to include Indian ricegrass, Thurber's needlegrass, desert needlegrass, bottlebrush squirreltail, Basin wildrye, and Sandberg bluegrass, all start growing early in the spring. Removing the cattle before their growing season will ensure there is an adequate amount of photosynthetic material remaining for production of carbohydrates to meet the growth and respiration demands of the plants. The plants will enter dormancy with more root reserves for next year's growth and will be better able to compete with cheatgrass. Removal of dead leafy material and stems on the perennial grasses during dormancy has little direct effect on the plants.

Soils:
The implementation of this alternative would have a very slight positive effect to the overall soils resource primarily due to slightly less grazing impacts to perennial grasses and forbs.

Invasive/Nonnative Species:
The implementation of this alternative would have very little effect on the two small noxious weed populations. These noxious weed infestations would be sprayed with the appropriate herbicides and monitored as part of the CCFO's annual treatment plan.

Wetlands/Riparian Zones:
Implementing the Proposed Action would maintain or slightly improve riparian conditions on the allotment. The proposed change in season of use would afford some additional rest during the early part

of the growing season, but current grazing practices do not appear to be significantly affecting riparian conditions.

Water Quality (Ground & Surface):
Implementing the Proposed Action would maintain or slightly improve water quality at Wild Rose and Sheehan Springs. The proposed change in season of use would afford some additional rest during the early part of the growing season, possibly enhancing ground cover and reducing sedimentation of the water. Current grazing practices, however, do not appear to be significantly affecting water quality.

General Wildlife:
This alternative is slightly better for general wildlife and game species than the current system; however, the difference from the current situation would be nearly indistinguishable.

The community structure of vegetation, especially in the lower elevation would not change. Some livestock grazing would last the entire spring season on cheatgrass leaving little for wildlife before the annual forage cured for the year. Spring growing native forbs and grasses would be eaten by livestock along with the cheatgrass. These natives would remain weakened so that cheatgrass could spread (FEIS 2008).

Actions that increase sagebrush, forbs and residual grass cover for nesting between April and July will benefit Sage-Grouse. The Proposed Action would likely benefit the perennial grasses more than the No Action Alternative though it still allows spring gazing which does not favor perennial grasses as much as grazing at other times of the year (Axtell 2008).

This alternative would not change the situation of having low diversity of riparian vegetation nor would it halt sagebrush encroachment.

The current situation as described in the affected environment for general wildlife and game species would remain. Some habitat conditions could continue to deteriorate.

Special Status Species:

Federally Listed Species

There is no impact to federally listed species or habitats since none occur in the allotment.

BLM Sensitive Species

Sage-Grouse were discussed as a game species. Loggerhead Shrike is not affected by the current conditions. The eagle, falcon and hawks would still do well. The community structure of vegetation, especially on the lower elevation would not change. Some livestock grazing would last the entire spring season on cheatgrass leaving little for wildlife before the annual forage cured for the year. Spring growing native forbs and grasses would be eaten by livestock along with the cheatgrass. These natives would remain weakened so that cheatgrass could spread (FEIS 2008).

This alternative would not change the situation of having a low diversity of riparian vegetation nor would it halt sagebrush encroachment.

BLM sensitive species would occur at levels below the greatest numbers and diversity possible, especially on the bench area of the allotment. Some habitat conditions could continue to deteriorate.

Migratory Birds

Livestock grazing allows some species to respond positively, some to respond negatively, and some to have a mixed response (Finch *et al* 1993). Under this alternative, native vegetation areas at lower elevations would see somewhat less livestock use in the spring. However, some livestock grazing would last the entire spring season leaving little for wildlife before the annual forage cured for the year. Spring growing native forbs and grasses would be eaten by livestock along with the cheatgrass. These natives would remain weakened so that cheatgrass could spread (FEIS 2008).

Food and prey items including small mammals, reptiles, insects and seeds would still not be produced closer to potential in upper elevations. Upper elevation understory would still lack diversity due to cheatgrass dominance. All migratory bird species that were sensitive to invasion of exotic vegetation would still be affected.

This alternative would not change the situation of having a low diversity of riparian vegetation nor would it halt sagebrush encroachment.

Habitat conditions would remain below the level that would support the greatest numbers and diversity of migratory birds. Some habitat conditions could continue to deteriorate.

No Action Alternative – Environmental Impacts

Range:

Permit #1: Under the No Action Alternative, grazing permit #1, which authorizes 15 cattle from November 1st until May 15th for a total of 100 AUM's, would not change.

Permit #2: Under the No Action Alternative, 116 cattle would be authorized to graze from November 1st through April 30th for a total of 596 AUM's.

Note: This permittee's leased land has decreased since the current permit was issued, due to the land-owner selling acreage to other individuals. The public land percentage will be adjusted from 86% to 89% to reflect this change in acreage, which is a reduction in cattle numbers from 116 to 112 head. This change will be made and a new permit issued regardless of the Alternative chosen as this is an administrative procedure and does not require an EA.

Vegetation:

Under the No Action Alternative, the two grazing permits would authorize up to 696 AUM's to be grazed from the allotment, with most of the utilization occurring on the same areas and plants as in prior years.

On heavy cheatgrass years, there would be less dead plant material to contribute to hotter and larger wildfires; however; less forage would be available for wildlife species in the spring. Also, the perennial grasses that occur on the lower elevations would continue to be grazed for approximately two months of their growing season, which would reduce their ability to compete with cheatgrass and other invasive plant species.

Soils:

The implementation of this alternative could have a slightly negative effect on the soil resource since there would continue to be a slight to moderate reduction in perennial grasses and forbs.

Invasive/Nonnative Species:
The implementation of this alternative would have very little effect on the two small noxious weed populations. These noxious weed infestations would be sprayed with the appropriate herbicides and monitored as part of the CCFO's annual treatment plan.

Wetlands/Riparian Zones:
Continuing current management would maintain riparian conditions on the allotment. Current grazing practices do not appear to be significantly affecting riparian conditions.

Water Quality (Ground & Surface):
Continuing current management would maintain water quality at Wild Rose and Sheehan Springs. Current grazing practices do not appear to be significantly affecting water quality.

General Wildlife:
This alternative is not substantially different from the Proposed Action. A few cattle would be removed in spring, but their absence would be difficult to detect.

Special Status Species

Federally Listed Species

There is no impact to federally listed species or habitats since none occur in the allotment.

BLM Sensitive Species

This alternative is not substantially different from the Proposed Action. A few cattle would be removed in spring, but their absence would be difficult to detect.

Migratory Birds

This alternative is not substantially different from the Proposed Action. A few cattle would be removed in spring, but their absence would be difficult to detect.

No Grazing Alternative– Environmental Impacts

Range:
Permit #1: Under the No Grazing Alternative, the current term grazing permit, which expires February 28, 2017, would be canceled.

Permit #2: Under the No Grazing Alternative, the current term grazing permit, which expires in February 28, 2009, would be canceled.

With the two permit cancellations, no livestock would be authorized on BLM-managed lands within the allotment.

Vegetation:
Under the No Grazing Alternative, vegetation would not be directly impacted by livestock grazing. The amount of above ground biomass would not be decreased by cattle, making it totally available for wildlife. An increase in plant diversity and production should result as trampling, grazing, and browsing by livestock would be eliminated. The above is true, assuming that no trespass cattle are allowed onto the allotment.

Until the perennial grasses are healthier, more vigorous, and producing new plants, this alternative may increase the chances of a hotter wildfire, especially in heavy cheatgrass years. This would diminish as the perennial grasses became more abundant, eventually outcompeting the cheatgrass.

This alternative would not allow for the proper use of a renewable resource (range forage) as provided for by various Federal Acts and in the CCFO CRMP 2001.

Soils:
The implementation of this alternative would positively impact the soils resource since basal cover from perennial grasses and forbs would probably increase.

Invasive/Nonnative Species:
The implementation of this alternative would have a slight positive effect on noxious weed populations. Treatment and monitoring would continue, but the lessening of impacts to riparian areas would decrease the possibility of noxious species establishment.

Wetlands/Riparian Zones:
Canceling the grazing permit would maintain or slightly improve riparian conditions on the allotment by eliminating possible livestock grazing impacts. Estray horses, however, would still use the area. Current grazing practices do not appear to be significantly affecting riparian conditions.

Water Quality (Ground & Surface):
Canceling the grazing permit would maintain or slightly improve water quality at Wild Rose and Sheehan Springs by eliminating possible livestock grazing impacts. Estray horses, however, would still use the area. Current grazing practices do not appear to be significantly affecting water quality.

Wildlife:
This alternative would be the most conducive for general wildlife, game species, BLM sensitive species and migratory birds that currently use the allotment. The No Grazing Alternative would likely benefit Sage-Grouse the most, by maximizing residual herbaceous cover for nesting and eliminating grazing on perennial grasses, allowing them to maximize seed production, and protecting mycorrhizal crusts from hoof action. Mycorrhizal crusts are important in seed germination for many native species of plants (Axtell 2008).

There would be no opportunity for impacts from livestock grazing. All exotic plant species would remain intact yearlong for wildlife use. Native species would be totally available for wildlife use. Native species with cheatgrass understory would have an opportunity to regain vigor and could be very healthy in the future. The threat of cheatgrass invasion into more native vegetation areas facilitated by livestock disturbance would be lessened or eliminated.

Cumulative Impacts

All resource values have been evaluated for cumulative impacts. It has been determined that cumulative impacts would be negligible as a result of the Proposed Action or alternatives.

The issuance of two term grazing permits for the Olinghouse Allotment is a discrete action, and would cause no known cumulative impacts to the environment when considered in combination with any known or anticipated actions on these or adjacent lands in the past, present, or foreseeable future. Any effects of the moderate grazing levels proposed would be limited to the project area.

The grazing levels considered under these alternatives are either no grazing or grazing at moderate levels. Grazing at these levels has not been shown to be injurious to plant or animal species in the area. The effects of grazing at moderate levels, along with associated activities in the management of this allotment, such as maintenance or construction of range improvements, would be limited to the immediate area of the allotment. They would not combine with any known, or reasonably foreseen activities on these or adjacent lands to produce any detrimental cumulative impacts in the area.

Although the effects of the future wind energy projects have not been analyzed and the full extent of these effects are unknown, these projects could potentially open the western portion of the allotment up to incidental use. This would fragment existing habitat further and put more stress on existing wildlife populations. The combined effect of the wind energy projects and less than ideal wildlife habitat conditions in this allotment would not be beneficial for wildlife populations.

Monitoring

Range monitoring would continue for the Olinghouse Allotment as it has in the past. The CCFO will continue to do the following: (1) Photo Point, (2) 100' Quadratic Frequency (3) Utilization, (4) Use Pattern Maps, (5) Rangeland Health Assessments, (6) Riparian Health Assessments, (7) Actual Use Reports, (8) Weather Data, and (9) Compliance Checks. Actual methods used would depend on monitoring needs, conditions, and resources available.

V. CONSULTATION & COORDINATION

List of Preparers:

1.	Jill Devaurs	Rangeland Management Specialist
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6.	Rita Suminski	Wildlife Biologist
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8.	John Axtell	Wildlife Biologist/WHB Specialist
9.	Terri Knutson	Environmental Coordinator
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Persons, Groups or Agencies Consulted:

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www.natureserve.com

www.fws.gov/nevada/protected_species/index.html

FEIS = www.fs.fed.us/database/feis/

APPENDIX A

Jack Bassett current permitted use: 596 AUM's
Permit before latest reduction (effective 12/05/05): 86% Public Land
Total Useable AUM's before: 596 AUM's/.86 = 693 AUM's
NV Land & Resources lease before 2005 reduction: 2,948.4 acres
NV Land & Resources lease after 2005 reduction: 2,308.40 acres
Percent of original total: 2,308.4/2,948.4 = .7829 or 78%
Total AUM's in the lease agreement: 693 AUM's – 596 AUM's = 97 AUM's
New lease agreement total AUM's: 97 AUM's x .7829 = 76 AUM's
New Percent Public Land: 596 AUM's/(76 + 596) = 596/672 = 89% Public Land
Number of days: 181 days
Number of cattle: (30.41666 x 596 AUM's/181 days)/.89 PL = 113 head

New Permit Numbers: 112 cattle 11/01 – 04/30 @ 89% PL = 596 AUM's

APPENDIX B

BLM Sensitive Species associated with Olinghouse Allotment

Animal

Burrowing Owl - *Athene cunicularia*
Golden Eagle – *Aquila chrysaetos*
Ferruginous Hawk – *Buteo regalis*
Prairie Falcon – *Falco mexicanus*
Peregrine Falcon – *Falco peregrinus*
Swainson's Hawk – *Buteo swainsoni*
Juniper Titmouse – *Baeolophus griseus*
Loggerhead Shrike- *Lanius ludovicianus* (possible nesting)
Vesper Sparrow – *Pooecetes gamineus*
Gray Vireo – *Vireo vicinior*
Bendire's Thrasher – *Toxostoma bendirei*
Sage-Grouse - *Centrocercus urophasianus*
Pallid bat – *Antrozous pallidus*
Spotted bat – *Euderma maculatum*
Fringed myotis – *Myotis thysanodes*
Western pipistrelle bat - *Pipistrellus hesperus*
Brazilian free-tailed bat - *Tadarida braziliensis*
California myotis – *Myotis californicus*
Yuma myotis – *Myotis yumanensis*
Small-footed myotis – *Myotis ciliolabrum*
Mountain Quail – *Oreortyx pictus*
Pygmy rabbit – *Brachylagus idahoensis*

APPENDIX C

Neo-tropical Migratory Birds, Species of Concern on Olinghouse Allotment

Salt Desert (Neel 1999)

Burrowing Owl	*Athene cunicularia*
Loggerhead Shrike	*Lanius ludovicianus*

Issues: Loss of understory due to excessive livestock grazing, invasion of exotic annuals (Neel 1999). Conversion of habitat for human use (Floyd et al 2007). Livestock grazing not an issue for Loggerhead Shrike (www.natureserve.com).

Western Shrublands **(**Beidleman 2000) – Species of concern associated with this habitat type in the plan area are the following:

Shrubsteppe (Beidleman 2000), **Sagebrush** (Neel 1999)

Sage Sparrow	*Amphispiza belli*	
Sage-Grouse	*Centrocercus urophasianus*	
Brewer's Sparrow	*Spizella breweri*	
Ferruginous Hawk	*Buteo regalis*	
Prairie Falcon	*Falco mexicanus*	(cliffs critical for nesting)
Northern Harrier	*Circus cyaneus*	
Mourning Dove	*Zenaida macroura*	

Mountain Shrub (Neel 1999; Beidleman 2000)

Virginia's Warbler	*Vermivora virginiae*

Issues: fragmentation from man-caused activities. Overgrazing of grasses and forbs that alter community structure; invasion of non-native grasses and fire suppression/crown-killing wildfire (Beidleman 2000). Loss of shrub understory and increasing human infrastructure which fragments and degrades habitat and increases soil erosion was also identified (Neel; Nevada Wildlife Action Plan 2006). Loss of habitat due to heavy grazing, altered fire regimes, and spread of introduced plants (Neel 1999; Floyd et al 2007). Human disturbance for Loggerhead Shrike is not an issue. Sage Sparrow are sensitive to habitat fragmentation. Brewer's Sparrow issues are related to agricultural and urban development, livestock grazing, cheatgrass invasion, herbicides, altered fire regimes (Floyd et al 2007).

Note: Shrubsteppe was identified as the highest priority habitat for conservation for breeding birds (Saab and Rich 1997; Paige and Ritter 1999). 10% of the world's population of Ferruginous Hawks breed in Nevada (Floyd et al 2007).

Woodland – (Beidleman 2000) Pinyon-juniper woodlands are characteristic of this habitat type. Species of concern associated with this habitat type in the plan area are the following:

Gray Vireo *Vireo vicinior*
Pinyon Jay *Gymnorhinus cyanocephalus* (This bird is an obligate of pinyon pine.)

Swainson's Hawk *Buteo swainsoni*

Issues: fragmentation from man-caused activities and conversion to grasslands (Beidleman 2000); heavy livestock grazing and cowbird parasitism are threats to Gray Vireo. Changes in fire regimes are a threat to Pinyon Jay (Floyd et al 2007).

Note: This habitat type supports the largest nesting-bird species list of any upland vegetation type in the West (Beidleman 2000).

Cliffs and Talus (Neel 1999)
Golden Eagle *Aquila chrysaetos*

Issues: mining activity, rock climbing (Neel 1999). Golden Eagles are relatively intolerant of human activity (Floyd et al 2007).

/s/
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